CLAIMS

1. A seamless containment system comprising:

a mat of polymer-modified asphalt having an air void content less than 6%, permeability less than $1x\ 10^{-5}$ cm/sec, and a resilient modulus of less than 3000 MPa; and

at least one of an installation joint, the joint having a first cold panel and a second overlapping hot panel wherein modified asphalt is placed between the first and the second panels during installation binding the first and the second panels.

2. The containment system of claim 1 wherein the permeability is less than 1×10^{-7} cm/sec.

3. The containment system of claim 1 wherein the permeability is less than 1×10^{-8} cm/sec.

4. The containment system of claim 1 wherein the resilient modulus is less than 2500 Mpa.

5. The containment system of claim 1 wherein the mat has a thickness in the range of 2 inches to 10 inches.

6. The containment system of claim 5 wherein the mat has a thickness of 4 inches.

7. The containment system of claim 1 wherein the air void content is less than 4%.

8. The containment system of claim 1 wherein the joint further includes a membrane between the first and second panel.

9. The containment system of claim 8 wherein the membrane further includes at least one of a window, the window providing an area of bonding contact between the first panel and the second panel.

10. The containment system of claim 1 wherein the first panel has a decreasing thickness.

11. The containment system of claim 1 wherein the first panel extends a length of approximately 10 feet.

12. The containment system of claim 1 wherein the mat has a temperature during installation of at least 300 °F.

13. A joint for an asphalt paving mat having permeability less than 1 x 10^{-5} cm/sec comprising:

a first panel having a first edge and a second edge, the first edge having a first thickness and the second edge having a thickness less than the first thickness such that the panel has a tapered cross sectional thickness;

modified asphalt on a top surface of the first panel; and

a second panel overlaying the first panel, the second panel having a reciprocal tapered cross sectional thickness wherein the combination of the first and the second panels provides a constant thickness.

14. The joint of claim 13 further including a stepped edge in the first panel.

15. The joint of claim 14 wherein the stepped edge is 1 inch in depth and is formed by asphalt milling.

16. The joint of claim 13 further including a sealant along a top surface where the first panel and the second panel join together.

17. The joint of claim 13 further including a membrane positioned between the first and the second panels.

18. The joint of claim 17 wherein the membrane further includes at least one of a window, the window providing an area of bonding contact between the first panel and the second panel.